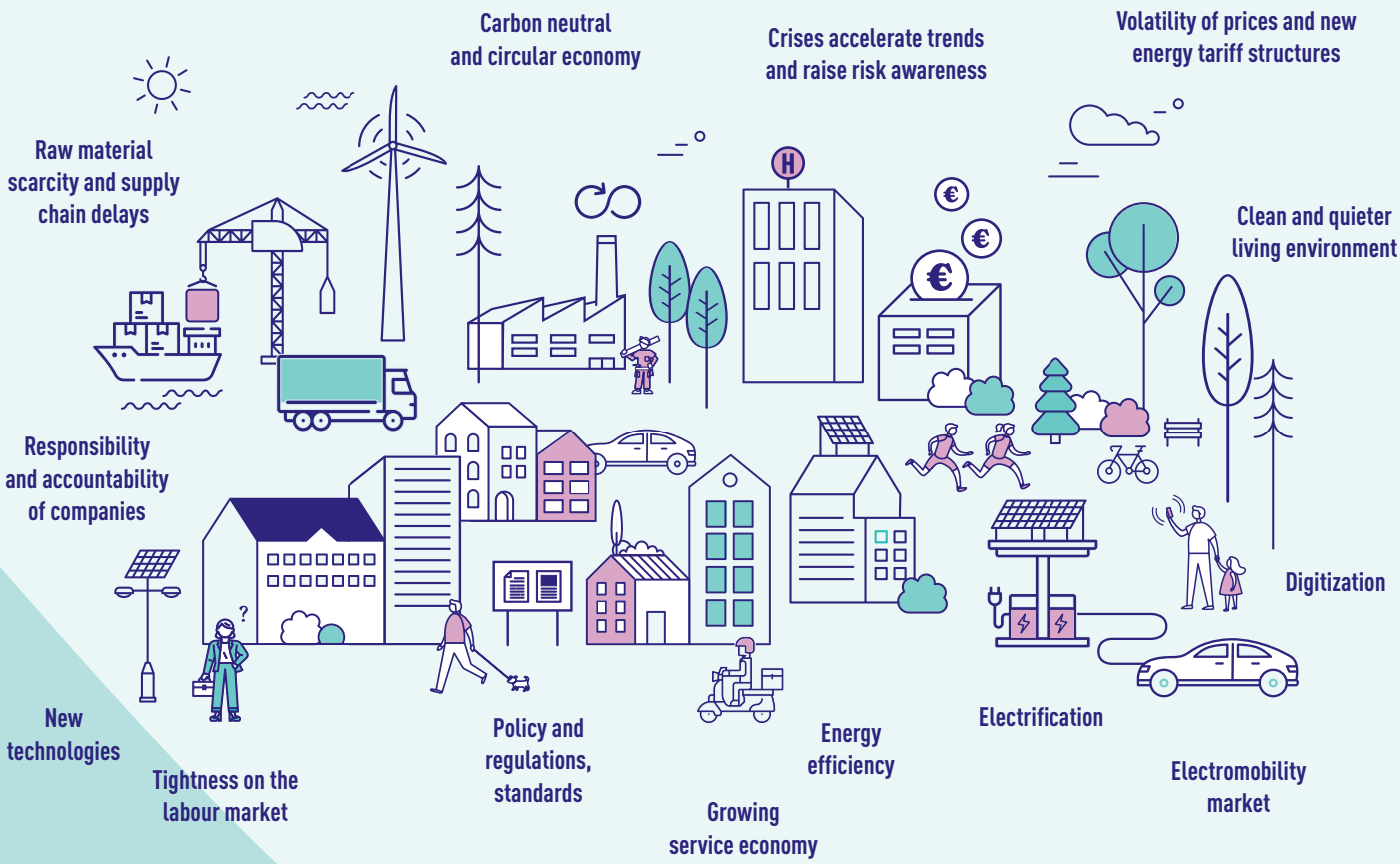
STRATEGIC COMPETENCE PROGNOSIS
of the battery value chain in Flanders

TRENDS
affecting the battery market



EFFECTS
on the strategic choices of companies

FOCUSSING ON
- Total system solutions
- Energy services
- Strategic Partnerships
- Modularity
- Circularity
- Use of Artificial Intelligence
- Specialization
- Monitoring of complete battery systems
- Education

PROVIDING
After sales & aftercare services

STRIVE FOR
Circularity

CREATING
Own digital platforms and systems to increase the user-friendliness

Each strategic choice will affect the required competences ➡

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Storage of electrical energy is a new market at the heart of the energy transition. Batteries are a key technology for carbon neutral mobility and energy storage in electricity systems. This booming sector offers many **employment opportunities** across the entire value chain, especially in the **product and use phase.**

Further development of the market requires the availability of **qualified workers with specific competences** that are essential for the labour market in the battery value chain ❶. In addition, battery-specific competences are required ❷ together with more general competences around soft skills ❸. Focusing on this competence development is necessary for the labour market to allow the sector to grow further and to realize its economic potential.

❶ ESSENTIAL COMPETENCES

Basic knowledge of electricity in the different educational levels

Specific **safety risks** of energy and battery storage systems

Understanding and mastering **tech-writing** for translating highly specialized knowledge into clear understandable instructions

Flexibility, learning ability and learning willingness of employees

❷ BATTERY SPECIFIC

Key processes in the battery value chain

DEVELOPMENT OF COMPONENTS (1)
- **Knowledge of electrotechnical standards,** guidelines and legislation regarding electrical installations
- **In combination with IT**: knowledge of programming, communication protocols, modelling of 'digital twins', machine learning, artificial intelligence, cyber security, privacy legislation, GDPR

ASSEMBLY (2)
- **Knowledge of safety risks**, PPE and safety regulations

TECHNICAL SALES (3)
- Insight in the basics of **technical** electricity aspects
- **Analytical** skills
- Knowledge of **financing** options
- Understanding the **market**

CONTROL AND OPTIMIZATION (4)
- Knowledge of **laws and regulations**
- Detailed technical **electrical knowledge**
- **IT programming** skills and knowledge of **cybersecurity**
- **Safety coordination**, project management and didactic competences

❸ NON-BATTERY SPECIFIC

General competences, soft skills

COMMUNICATION SKILLS
Consultation, presentation and communication skills

INTERDISCIPLINARY COMMUNICATION
Between battery specialists and data managers

BASIC DIGITAL SKILLS
Intention to further develop these skills

COLLABORATION SKILLS
Teamwork and coordination

COMMERCIAL SKILLS
Consultancy based proposal creating

KNOWLEDGE TRANSFER
Tech-writing & teaching skills, common language

LABOR MARKET, TRAINING AND EDUCATION

The changes in competences are essential for the development of the sector. By tailoring the training and education offer to the necessary competences, we anticipate the dynamics of the labour market. In this way we improve the employability of workers, which has a positive effect on the development of the sector and increases the acceleration of the energy transition.

Europe is committed to developing a full battery value chain to realize the energy transition and to create a competitive battery industry. The European Battery Alliance estimates the annual European market value of the sector reaching EUR 250 billion from 2025 onwards, accounting for 4 million new jobs and the need for up- or reskilling of 800,000 others.

ACTIONS

Inform & sensitize

Visualize the most important **trends, bottlenecks and changes in competences**. The results will be disseminated as widely as possible.
→ Support STEM campaigns

Organize a learning network

- Exchange information
- Build trust
- Strengthen collaboration

Educate

- **Updating** secondary school education **curricula** : elementary knowledge of electrical engineering & safety
- **Updating existing offerings** in training centres and educational institutions
- **Developing a new course:** basic module on energy transition and systems thinking

Read the full report here (in DUTCH)

info@flux50.com

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